

WHAT IS CLAIMED IS:

1. A control circuit of an electronic ballast for a fluorescent lamp, comprising:
  - a protection circuit capable of automatically stopping an oscillation circuit of an electronic ballast to generate an abnormal high AC voltage when a fluorescent lamp tube is defective, wherein the control circuit connects an output terminal P8 of the electronic ballast to a ground via a capacitor C11 and a resistor R8 in a series connection, and a junction between the capacitor C11 and resistor R8 is connected to an anode of a diode D12, and a cathode of the diode D12 is connected to a resistor R9 which in turn is connected to the ground via a capacitor C12, and the resistor R9 and capacitor C12 forms an integrator circuit, and the capacitor C12 is in a parallel connection with a resistor R10, and the resistor R10, capacitor C12, and resistor R9 are all connected to a cathode of a Zener diode D13, and an anode of the Zener diode D13 is connected to the ground via a capacitor C13 and to a gate of a SCR thyristor TH1, and a cathode of the SCR thyristor TH1 is connected to the ground, and an anode of the SCR thyristor TH1 is connected to a junction between a resistor R5 and a resistor R1 inside the electronic ballast and a cathode of a diode D11, and an anode of the diode D11 is connected to a terminal P3 of a primary winding T1A of a driving transformer of the electronic ballast; and
  - an automatic re-lamp circuit capable of lighting a newly-installed fluorescent lamp tube without switching off and on a supplying power after a defective lamp tube is taken down, wherein the automatic re-lamp circuit connects a direct current (DC) voltage positive output terminal of a filtered and rectified input alternating current (AC) power supply to a resistor R11, and

the resistor R11 is connected to the ground via a series connection of a resistor R12 and a capacitor C14, and a junction of the resistor R11 and resistor R12 is connected to a terminal P4 of a fluorescent lamp tube's filaments via a line A, and a resistor R13 connects a junction of the resistor R12 and capacitor C14 to an anode of diode D14, and a cathode of the diode D14 is connected to a base of a transistor Q3, and an emitter of the transistor Q3 is connected to the ground, and a collector of the transistor Q3 is connected to the anode of the SCR thyristor TH1 within the protection circuit.

2. The control circuit as claimed in **Claim 1**, wherein the capacitor C13 of the protection circuit is to prevent interference from high frequency noises.
3. The control circuit as claimed in **Claim 1**, wherein the capacitor C14 is to provide a by-pass so that an AC voltage from a filament is by-passed to a ground and does not affect the transistor Q3's normal operation under a normal lighting condition.